

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

Neo Wireless LLC,

Plaintiff,

v.

Apple Inc.

Defendant.

CIVIL ACTION NO. 6:21-cv-0026

JURY TRIAL DEMANDED

**PLAINTIFF’S ORIGINAL COMPLAINT**

Plaintiff Neo Wireless LLC (“Plaintiff” or “Neo Wireless”) files this Original Complaint against Defendant Apple Inc. (“Apple”) for patent infringement under 35 U.S.C. § 271. Plaintiff alleges, based on its own personal knowledge with respect to its own actions and based upon information and belief with respect to all others’ actions, as follows:

**THE PARTIES**

1. Plaintiff Neo Wireless LLC is a Delaware corporation with its principal place of business located in Wayne, Pennsylvania.
2. On information and belief, Defendant Apple is a California corporation with its principal place of business located at One Apple Park Way, Cupertino, California 95014. Apple maintains several regular and established places of business in the Western District of Texas including at 12535 Riata Vista Circle and 5501 West Parmer Lane, Austin, Texas 78727; 2901 S. Capital of Texas Hwy, Austin, TX 78746; 3121 Palm Way, Austin, TX 78758; 8401 Gateway Boulevard West, El Paso, TX 79925; 15900 La Cantera Parkway, San Antonio, TX 78256; and 7400 San Pedro Avenue, San Antonio,

TX 78216. Moreover, Apple maintains seventeen regular and established storefront Apple Stores across the state of Texas.<sup>1</sup> Apple offers and sells its products and/or services, including those accused herein of infringement, to customers and potential customers located in Texas, including in the judicial Western District of Texas, such as at the Barton Creek Mall (2901 S. Capital of Texas Hwy) and in the Domain (3121 Palm Way) in Austin, Texas. Apple may be served with process through its registered agent for service in Texas: CT Corporation System, 1999 Bryan Street, Suite 900, Dallas Texas 75201.

3. On information and belief, seven of Apple's suppliers manufacture products, including those relevant to this Complaint, in the State of Texas. Cypress Semiconductor Corporation, Flex Limited, Samsung Electronics Company Limited, and Maxim Integrated Products Incorporated are all located within this judicial district. Hon Hai Precision Industry Company Limited (FoxConn) is located in the Dallas/Fort Worth metroplex.<sup>2</sup> On information and belief, Cypress Semiconductor, Apple's supplier, produces chips for use in Apple's Accused Instrumentalities in its Austin factory at Apple's direction and specification.<sup>3</sup> On information and belief, Flex Limited or Flextronics, Apple's supplier, assembles infringing products in its Austin factory at

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<sup>1</sup> <https://www.apple.com/retail/storelist/>

<sup>2</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>.

<sup>3</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>; <https://www.investopedia.com/4-stocks-poised-to-gain-as-new-iphone-sales-beat-expectations-4769942>; <https://www.austinhomeseecker.com/cypress-semiconductor.php>; <https://9to5mac.com/2020/02/26/iphone-fixed-broadcom-chip-flaw/>.

Apple's direction and specifications.<sup>4</sup> On information and belief, Hon Hai Precision Industry or Foxconn, Apple's primary assembly supplier, has two plants for Apple products located in Fort Worth, Texas. At least one of these plants is a repair factory for Apple's products, including infringing products.<sup>5</sup> On information and belief, Maxim Integrated, Apple's supplier, produces chips used in the Accused Instrumentalities in its San Antonio factory at Apple's direction and specifications.<sup>6</sup> On information and belief, Qorvo, Apple's supplier, produces radio frequency chips used in the Accused Instrumentalities in its Richardson factory location at Apple's direction and specifications.<sup>7</sup> On information and belief, Samsung, Apple's supplier, designs and produces chips used in the Accused Instrumentalities in its Austin factory (as discussed in greater detail below) at Apple's direction and specifications.

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<sup>4</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>; <https://www.bloomberg.com/news/articles/2020-04-04/apple-supplier-targets-production-of-30-000-ventilators-a-month>; <https://www.cnbc.com/2019/11/20/apple-ceo-tim-cook-and-president-trump-tour-texas-computer-factory.html>.

<sup>5</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>; <https://focustaiwan.tw/sci-tech/201903090004>; <https://dallasinnovates.com/uta-teams-with-foxconn-to-help-reduce-iphone-fraudulent-claims1423/>.

<sup>6</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>; <https://appleinsider.com/articles/12/07/19/made-in-america-apples-supply-chain-increasing-us-production>; [https://en.wikipedia.org/wiki/Maxim\\_Integrated](https://en.wikipedia.org/wiki/Maxim_Integrated); <https://pdfserv.maximintegrated.com/en/pr/SanAntonio.pdf>.

<sup>7</sup> <https://www.apple.com/supplier-responsibility/pdf/Apple-Supplier-List.pdf>; <https://www.forbes.com/sites/greatspeculations/2020/05/29/qualcomm-qorvo-jabil-apple-suppliers-have-been-left-behind-from-the-rally-time-to-buy/#677ea6942257>; <https://www.fool.com/investing/2020/03/03/apple-supplier-qorvo-cuts-guidance-coronavirus.aspx>.

## **JURISDICTION AND VENUE**

4. This action includes a claim of patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Apple. As indicated above, Apple conducts business and has committed acts of patent infringement and has induced and contributed to acts of patent infringement by others in this District, the State of Texas, and elsewhere in the United States.

6. Venue is proper in this judicial district per 28 U.S.C. §§ 1391 and 1400(b).

7. Apple has committed acts of infringement in this judicial district and maintains regular and established places of business in this district, as set forth above. Apple has continuous and systematic business contacts with the State of Texas. Apple, directly or through subsidiaries or intermediaries (including distributors, retailers, contract manufacturers, and others), conducts its business extensively throughout Texas, by shipping, manufacturing, distributing, offering for sale, selling, and advertising (including the provision of interactive web pages) its products and services in the State of Texas and the Western District of Texas.

8. Apple, directly or through subsidiaries or intermediaries (including distributors, retailers, contract manufacturers, and others), has purposefully and voluntarily placed its infringing products and services into this District and into the stream of commerce with the intention and expectation that they will be purchased and used by consumers in this District. Apple has offered and sold and continues to offer and sell these infringing products and services in this District, including at its seventeen

physical Apple stores located within the state and more specifically those stores located in this District such as at 5501 West Parmer Lane, Austin, Texas, 2901 S. Capital of Texas Hwy, Austin, TX 78746; 3121 Palm Way, Austin, TX 78758; 8401 Gateway Boulevard West, El Paso, TX 79925; 15900 La Cantera Parkway, San Antonio, TX 78256; and 7400 San Pedro Avenue, San Antonio, TX 78216.<sup>8</sup> Moreover, Apple has authorized its infringing products to be sold by numerous third-party sellers. For example, Apple's website indicates at least 99 stores sell infringing iPhones in Austin,<sup>9</sup> at least 99 stores sell infringing iPhones in the Waco area,<sup>10</sup> and at least 99 stores sell infringing iPhones in San Antonio.<sup>11</sup> Put simply, Apple has authorized hundreds of stores located in the Western District of Texas to sell infringing products to customers and other end-users.

9. Apple has committed acts of infringement in this judicial district and has a regular and established place of business in this judicial district. Apple declared in September 2019 a "newly redesigned Mac Pro" would be manufactured in a factory in Austin, where Mac Pro has been made since 2013. According to supply chain sources, Apple is going to launch a 5G Mac Pro in the second half of 2020 that will be

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<sup>8</sup> <https://www.apple.com/retail/storelist/>.

<sup>9</sup> <https://locate.apple.com/sales/?pt=3&lat=30.2642643&lon=-97.7475016&address=Austin>.

<sup>10</sup> <https://locate.apple.com/sales/?pt=3&lat=31.558389&lon=-97.129989&address=Waco>.

<sup>11</sup> <https://locate.apple.com/sales/?pt=3&lat=29.424586&lon=-98.49464&address=San%20antonio>.

manufactured in its Austin manufacturing plant.<sup>12</sup> In 2018, Apple announced an expansion of its operations in Austin, including an investment of \$1 billion to build a new campus. To date, Apple's campus houses over 8,000 employees with the capacity to grow to upwards of 15,000 employees, some of which have relevant knowledge of the accused technology. For example, Apple recently published an Austin job posting for a Baseband HW Design Engineer to be a part of their design team responsible for "architecture, design, implementation, and integration of the baseband systems for all Apple products."<sup>13</sup> This expansion has made Apple the largest private employer in the city of Austin and contributed to the significant increase of Apple engineers located in Austin. The campus's functions include engineering, R&D, operations, finance, sales and customer support.<sup>14</sup> Apple's Austin campus is the company's second largest physical campus and will include a 192-room hotel to house Apple employees who travel to Austin for work; three million square feet including two million square feet of office space (making it one of the world's largest office buildings); and a significant tax break from Williamson County for building this campus. This Austin location is a continuation of Apple's partnership with the Austin area that has existed for 30 years.

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<sup>12</sup> <https://www.apple.com/newsroom/2019/09/apples-new-mac-pro-to-be-made-in-texas/>; <https://www.apple.com/newsroom/2019/11/apple-expands-in-austin/>; <https://www.digitimes.com/news/a20190802PD207.html>; <https://www.macrumors.com/2019/08/02/apple-to-launch-macbooks-with-5g-2h-2020/>;

<sup>13</sup> <https://jobs.apple.com/en-us/details/200163864/baseband-hw-design-engineer>.

<sup>14</sup> <https://www.apple.com/newsroom/2018/12/apple-to-build-new-campus-in-austin-and-add-jobs-across-the-us/>; <https://www.apple.com/newsroom/2019/11/apple-expands-in-austin/>; <https://communityimpact.com/austin/northwest-austin/technology/2020/05/21/revised-apple-campus-site-plan-in-northwest-austin-includes-new-6-story-hotel/>

10. Apple additionally operates a research lab in Austin trying to figure out ways to recycle iPhones.<sup>15</sup>

### **ASSERTED PATENTS**

11. On June 18, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,467,366 (“the ’366 patent”), entitled “Methods and Apparatus for Random Access in Multi-Carrier Communication Systems.” A copy of the ’366 patent is attached as Exhibit A.

12. The ’366 patent issued from U.S. Patent Application 13/205,579, which was assigned from the inventors to Waltical Solutions, Inc. on April 8, 2005. The application was later assigned from Waltical Solutions, Inc. to Neocific, Inc. on December 14, 2005. The now-issued ’366 patent was assigned from Neocific, Inc. to CFIP NCF LLC on November’ 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

13. The ’366 patent is valid and enforceable.

14. On June 7, 2016, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,363,066 (“the ’066 patent”), entitled “Method and Apparatus for Flexible Use of Frequency Bands.” A copy of the ’066 patent is attached as Exhibit B.

15. The ’066 patent issued from U.S. Patent Application 14/041,495, which was assigned from the inventors to Neocific, Inc. on February 2, 2012. The now-

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<sup>15</sup> <https://www.cnet.com/news/apple-is-opening-up-its-world-of-iphone-recycling/>; <https://appleinsider.com/articles/19/04/18/apple-increases-recycling-program-efforts-ahead-of-earth-day>

issued '066 patent was later assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

16. The '066 patent is valid and enforceable.

17. On April 17, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,833,908 (“the '908 patent”), entitled “Channel Probing Signal for a Broadband Communication System.” A copy of the '908 patent is attached as Exhibit C.

18. The '908 patent issued from U.S. Patent Application 16/902,740, which was filed by Neo Wireless LLC on behalf of the inventors.

19. The '908 patent is valid and enforceable.

20. On September 11, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,075,941 (“the '941 patent”), entitled “Methods and Apparatus for Multi-Carrier Communications With Adaptive Transmission and Feedback.” A copy of the '941 patent is attached as Exhibit D.

21. The '941 patent issued from U.S. Patent Application 15/082,878, which was assigned from the inventors to Waltical Solutions, Inc. on April 8, 2005. The application was later assigned from Waltical Solutions, Inc. to Neocific, Inc. on December 14, 2005. The now-issued '941 patent was assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

22. The '941 patent is valid and enforceable.

23. The '450 patent issued from U.S. Patent Application 15/676,421, which was assigned from the inventors to Neocific, Inc. on October 2, 2007. The now-issued '450 patent was later assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.



24. The '450 patent is valid and enforceable.

25. On October 15, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,447,450 (“the '450 patent”), entitled “Method and System for Multi-Carrier Packet Communication with Reduced Overhead.” A copy of the '450 patent is attached as Exhibit E.

26. Neo Wireless owns all rights, title, and interest in and to each of the '366, '066, '908, '941, and '450 patents (the “patents-in-suit”) and possesses all rights of recovery.

### **FACTUAL ALLEGATIONS**

27. Inventor Xiaodong (Alex) Li, Ph.D. founded Neocific Inc. in the early 2000s to design, develop, and implement a new wireless communication system. He and his co-inventors had extensive experience with wireless communications systems, including the development of the Wi-Max standards, and a deep understanding of the flaws in existing systems at the time. The inventors saw an opportunity to create a new wireless communication system meant to address those flaws while incorporating cutting-edge Orthogonal Frequency-Division Multiple Access (OFDMA) based technologies, and, starting in the 2004-2005 timeframe, they filed patents on the work.

28. Dr. Li served as the President and Founder of Neocific. Dr. Li obtained his Ph. D. in electrical engineering from the University of Washington, his M.S. from Shanghai Jiao Tong University, and his B.S. from Tsinghua University. Dr. Li has authored more than 30 journal and conference papers in wireless communications, video coding, and networking. He has been granted more than 100 U.S. and foreign patents.

29. Dr. Titus Lo, Ph.D. is a founding employee of Neocific. Dr. Lo obtained his Ph.D. in electrical engineering from McMaster University and his B.S. from the University of British Columbia. Dr. Lo has authored more than 30 technical papers in

international peer-reviewed journals and presented more than 50 times at industry events. He has been granted more than 100 U.S. and foreign patents.

30. Neo Wireless owns all substantial right, title, and interest in the patents-in-suit, and holds the right to sue and recover damages for infringement thereof..

31. David Loo is the CEO of Plaintiff Neo Wireless. Mr. Loo works and resides in Wayne, Pennsylvania. Mr. Loo has over a decade of experience as a licensing executive and patent attorney with a well-established track record of assisting companies, inventors and patent holders to ensure they are fairly compensated for their inventions.

32. The wireless communication industry has been developing rapidly since Bell Labs developed the First Generation of modern commercial cellular technology in 1984. Multiple wireless communication technologies designated by generations emerged and brought new capacities to people all over the world. In 2008, The 3rd Generation Partnership Project (“3GPP”) created and finalized the LTE standards as an upgrade to 3G. The cellular industry recognized its major benefits, and virtually all cellular device manufacturers, including Apple, have embraced LTE as the next generation of commercial cellular technology and developed phones and other cellular devices to utilize the 4G LTE technology.

33. Defendant Apple is a multinational company that is noted for its flagship product, the iPhone, which is designed and sold throughout the United States. The iPhone has brought great success to Apple. In 2019 alone, Apple reported a \$167 billion revenue from the sales of iPhone.

34. The iPhone is set up to use multiple cellular networks, such as LTE or 4G and New Radio (“NR”) or 5G. In 2012, Apple announced the iPhone 5, which was its first smartphone to support 4G LTE connectivity. Over five million units of iPhone 5 were sold within three days after its launch. Thereafter, Apple announced iPhone 5C, iPhone 5S, iPhone SE, iPhone 6, iPhone 6 Plus, iPhone 6S, iPhone 6S Plus, iPhone 7, iPhone 7 Plus, iPhone 8, iPhone 8 Plus, iPhone X, iPhone XS, iPhone XR, iPhone 11,

iPhone 11 Pro, and iPhone 11 Max, all with 4G LTE capabilities.

35. To utilize LTE or 4G and NR or 5G networks, the iPhone is manufactured to comply with wireless standards, such as the 3GPP standards, that ensure compatibility of wireless devices and wireless networks. Other cellular-capable devices of Apple, such as the iPad, iPad Air, iPad mini, iPad Pro, and Apple Watch, are designed to ensure compliance with the 3GPP standards as well.

36. Apple has been on notice of the asserted patents since at least the filing and/or service of this Complaint. Apple has known that the acts complained of below constituted infringement of the asserted patents, or at least subjectively believed there was a high probability of infringement of the asserted patents but took deliberate steps to avoid confirming the same.

37. As described above, the asserted patents read on portions of the LTE or 4G and NR or 5G standards, which Apple implements in its products (“Apple’s Accused Instrumentalities”), such as its iPhone products and other cellular-capable devices. Apple makes, uses, sells, offers to sell and/or imports these Accused Instrumentalities in the United States. Accordingly, Apple directly and indirectly infringes each of patents-in-suit.

38. Apple does not have any rights to the patents-in-suit.

39. In the interest of providing detailed averments of infringement, Neo Wireless has identified below at least one claim per patent to demonstrate infringement. However, the selection of claims should not be considered limiting, and additional claims of the patents-in-suit (including method, system, and apparatus claims) that are infringed by Apple will be disclosed in compliance with the Court’s rules related to infringement contentions.

#### **COUNT ONE: INFRINGEMENT OF THE ’366 PATENT**

40. Neo Wireless incorporates by reference the preceding paragraphs as if

fully set forth herein.

41. As described above, Defendant Apple has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, into its products.

42. Apple directly infringes the '366 patent because it has made, used, sold, offered to sell and/or imported its Accused Instrumentalities in the United States. For example, each of Apple's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 1 the '366 patent. *See* Exhibit F.

43. Apple's Accused Instrumentalities meet at least one claim of the '366 patent.

44. Apple makes, uses, offers to sell, sells, and imports Apple's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

45. Apple therefore infringes the '366 patent under 35 U.S.C. § 271(a).

46. Apple indirectly infringes the '366 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

47. Apple took the above actions intending to cause infringing acts by others.

48. Apple received actual notice of its infringement of the '366 patent at least as early as the date of service of Complaint. Therefore, Apple was or is now aware of the '366 patent or has willfully blinded itself as to the existence of the '366 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '366 patent at all times

relevant to this suit. Alternatively, Apple subjectively believed there was a high probability that others would infringe the '366 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. Apple therefore infringes the patents-in-suit under 35 U.S.C. § 271(b).

49. Apple indirectly infringes the '366 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, the Accused Instrumentalities) that constitute a material part of the inventions claimed in the '366 patent, and that are used to practice one or more processes/methods covered by the claims of the '366 patent. Apple's end-user customers directly infringe the '366 patent by, for example, using the cellular functionality of Apple's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

50. In offering to sell and selling the components specified above, Apple has known these components to be especially made or especially adapted for use in an infringement of the '366 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, Apple subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '366 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. Apple therefore infringes the '366 patent under 35 U.S.C. § 271(c).

51. To the extent that Apple releases any new version of Apple's Accused Instrumentalities, such instrumentalities will meet the claims of the '366 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to Apple's current infringement

described above.

52. Neo Wireless has been damaged and continues to be damaged by each of Apple's infringement of the 366 patent.

**COUNT TWO: INFRINGEMENT OF THE '066 PATENT**

53. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

54. As described above, Defendant Apple has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, into its products.

55. Apple directly infringes the '066 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of the Apple's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 6 the '066 patent. *See Exhibit G.*

56. Apple's Accused Instrumentalities meet at least one claim of the '066 patent.

57. Apple makes, uses, offers to sell, sells, and imports Apple's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

58. Apple therefore infringes the '066 patent under 35 U.S.C. § 271(a).

59. Apple indirectly infringes the '066 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

60. Apple took the above actions intending to cause infringing acts by others.

61. Apple received actual notice of its infringement of the '066 patent at least

as early as the date of service of Complaint. Therefore, Apple was or is now aware of the '066 patent or has willfully blinded itself as to the existence of the '066 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '066 patent at all times relevant to this suit. Alternatively, Apple subjectively believed there was a high probability that others would infringe the '066 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. Apple therefore infringes the '066 patent under 35 U.S.C. § 271(b).

62. Apple indirectly infringes the '066 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, the Accused Instrumentalities) that constitute a material part of the inventions claimed in the '066 patent, and that are used to practice one or more processes/methods covered by the claims of the '066 patent. Apple's end-user customers directly infringe the '066 patent by, for example, using the cellular functionality of Apple's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

63. In offering to sell and selling the components specified above, Apple has known these components to be especially made or especially adapted for use in an infringement of the '066 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, Apple subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '066 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. Apple therefore infringes the '066 patent under 35 U.S.C. § 271(c).

64. To the extent that Apple releases any new version of Apple's Accused Instrumentalities, such instrumentalities will meet the claims of the '066 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to Apple's current infringement described above.

65. Neo Wireless has been damaged and continues to be damaged by each of Apple's infringement of the 066 patent.

### **COUNT THREE: INFRINGEMENT OF THE '908 PATENT**

66. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

67. As described above, Defendant Apple has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, into its products.

68. Apple directly infringes the '908 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of Apple's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 11 the '908 patent. *See* Exhibit H.

69. Apple's Accused Instrumentalities meet at least one claim of the '908 patent.

70. Apple makes, uses, offers to sell, sells, and imports Apple's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

71. Apple therefore infringes the '908 patent under 35 U.S.C. § 271(a).

72. Apple indirectly infringes the '908 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take



advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

73. Apple took the above actions intending to cause infringing acts by others.

74. Apple received actual notice of its infringement of the '908 patent at least as early as the date of service of Complaint. Therefore, Apple was or is now aware of the '908 patent or has willfully blinded itself as to the existence of the '908 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '908 patent at all times relevant to this suit. Alternatively, Apple subjectively believed there was a high probability that others would infringe the '908 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. Apple therefore infringes the '908 patent under 35 U.S.C. § 271(b).

75. Apple indirectly infringes the '908 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, the Accused Instrumentalities) that constitute a material part of the inventions claimed in the '908 patent, and that are used to practice one or more processes/methods covered by the claims of the '908 patent. Apple's end-user customers directly infringe the '908 patent by, for example, using the cellular functionality of Apple's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

76. In offering to sell and selling the components specified above, Apple has known these components to be especially made or especially adapted for use in an infringement of the '908 patent and that these components are not a staple article or

commodity of commerce suitable for substantial non-infringing use. Alternatively, Apple subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '908 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. Apple therefore infringes the '908 patent under 35 U.S.C. § 271(c).

77. To the extent that Apple releases any new version of Apple's Accused Instrumentalities, such instrumentalities will meet the claims of the '908 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to Apple's current infringement described above.

78. Neo Wireless has been damaged and continues to be damaged by each of Apple's infringement of the 908 patent.

#### **COUNT FOUR: INFRINGEMENT OF THE '941 PATENT**

79. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

80. As described above, Defendant Apple has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, into its products.

81. Apple directly infringes the '941 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of Apple's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 13 the '941 patent. *See* Exhibit I.

82. Apple's Accused Instrumentalities meet at least one claim of the '941 patent.

83. Apple makes, uses, offers to sell, sells, and imports Apple's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

84. Apple therefore infringes the '941 patent under 35 U.S.C. § 271(a).

85. Apple indirectly infringes the '941 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

86. Apple took the above actions intending to cause infringing acts by others.

87. On information and belief, Apple was aware of the '941 patent prior to the filing of this lawsuit.

88. Apple patent U.S. 8,547,861 cites to related patents or patent applications in the '941 patent family.

89. Apple received actual notice of its infringement of the '941 patent at least as early as the date of service of Complaint. Therefore, Apple was or is now aware of the '941 patent or has willfully blinded itself as to the existence of the '941 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '941 patent at all times relevant to this suit. Alternatively, Apple subjectively believed there was a high probability that others would infringe the '941 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. Apple therefore infringes the '941 patent under 35 U.S.C. § 271(b).

90. Apple indirectly infringes the '941 patent by contributing to infringement

by others, such as end-user customers by offering to sell and selling within the United States components (that is, the Accused Instrumentalities) that constitute a material part of the inventions claimed in the '941 patent, and that are used to practice one or more processes/methods covered by the claims of the '941 patent. Apple's end-user customers directly infringe the '941 patent by, for example, using the cellular functionality of Apple's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

91. In offering to sell and selling the components specified above, Apple has known these components to be especially made or especially adapted for use in an infringement of the '941 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, Apple subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '941 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. Apple therefore infringes the '941 patent under 35 U.S.C. § 271(c).

92. To the extent that Apple releases any new version of Apple's Accused Instrumentalities, such instrumentalities will meet the claims of the '941 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to Apple's current infringement described above.

93. Neo Wireless has been damaged and continues to be damaged by each of Apple's infringement of the 941 patent.

#### **COUNT FIVE: INFRINGEMENT OF THE '450 PATENT**

94. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

95. As described above, Defendant Apple has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, into its products.

96. Apple directly infringes the '450 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of the Apple's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 7 the '450 patent. *See* Exhibit J.

97. Apple's Accused Instrumentalities meet at least one claim of the '450 patent.

98. Apple makes, uses, offers to sell, sells, and imports Apple's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

99. Apple therefore infringes the '450 patent under 35 U.S.C. § 271(a).

100. Apple indirectly infringes the '450 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

101. Apple took the above actions intending to cause infringing acts by others.

102. Apple received actual notice of its infringement of the '450 patent at least as early as the date of service of Complaint. Therefore, Apple was or is now aware of the '450 patent or has willfully blinded itself as to the existence of the '450 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '450 patent at all times

relevant to this suit. Alternatively, Apple subjectively believed there was a high probability that others would infringe the '450 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. Apple therefore infringes the '450 patent under 35 U.S.C. § 271(b).

103. Apple indirectly infringes the '450 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, the Accused Instrumentalities) that constitute a material part of the inventions claimed in the '450 patent, and that are used to practice one or more processes/methods covered by the claims of the '450 patent. Apple's end-user customers directly infringe the '450 patent by, for example, using the cellular functionality of Apple's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

104. In offering to sell and selling the components specified above, Apple has known these components to be especially made or especially adapted for use in an infringement of the '450 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, Apple subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '450 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. Apple therefore infringes the '450 patent under 35 U.S.C. § 271(c).

105. To the extent that Apple releases any new version of Apple's Accused Instrumentalities, such instrumentalities will meet the claims of the '450 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to Apple's current infringement described above.

106. Neo Wireless has been damaged and continues to be damaged by each of Apple's infringement of the '450 patent.

**JURY DEMAND**

Plaintiff hereby demands a trial by jury on all issues so triable.

**PRAYER FOR RELIEF**

WHEREFORE Plaintiff Neo Wireless LLC asks this Court for an order granting the following relief:

- a. a judgment in favor of Plaintiff that Apple has infringed, either literally and/or under the doctrine of equivalents, the patents-in-suit;
- b. a judgment and order requiring Apple to pay Plaintiff its damages, costs, expenses, and any enhanced damages to which Plaintiff is entitled for Defendant's infringement;
- c. a judgment and order requiring Apple to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;
- d. a judgment and order requiring Apple to pay ongoing royalties;
- e. a judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Plaintiff its reasonable attorney fees against Apple; and
- f. any and all other relief as the Court may deem appropriate and just under the circumstances.

DATED: January 13, 2021

Respectfully submitted,

/s/ Jason D. Cassady

Jason D. Cassady

Texas State Bar No.

Email: jcassady@caldwellcc.com

**CALDWELL CASSADY CURRY**

**P.C.**

2121 N. Pearl St., Suite 1200

Dallas, Texas 75201

Telephone: (214) 888-4848

Facsimile: (214) 888-4849

T. John Ward, Jr.

Texas Bar No. 00794818

jw@wsfirm.com

WARD, SMITH & HILL, PLLC

1507 Bill Owens Parkway

Longview, TX 75604

903-757-6400

903-757-2323 (Facsimile)

*Attorneys for Plaintiff Neo Wireless  
LLC*